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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/822,822	04/02/2001	Shinichi Baba	004900.00001	8088

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EXAMINER

JONES, PRENELL P

ART UNIT	PAPER NUMBER
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2619

MAIL DATE	DELIVERY MODE
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02/05/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

09/822,822

Applicant(s)

BABA ET AL.

Examiner

Prenell P. Jones

Art Unit

2619

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11/19/2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters; prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8,15,22-32 and 34-46 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8,15,22-32 and 34-46 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☒ Interview Summary (PTO-413)
Paper No(s)/Mail Date. 1/24/08.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

Response to Arguments

1. Applicant's arguments with respect to claims 1-8, 15, 22-32, and 34-46 have been considered but are moot in view of the new ground(s) of rejection.
2. Applicant argues that the cited prior art of Perkins et al, Comstock, Woo et al and La Porta et al fail to teach or disclose the claimed features of independent claims 1, 2, 15, 22 and 29. Specifically, Applicant argues that the limitation of the second base station transmitting content included a first message with said IP-in-IP encapsulation received from a first base station to a mobile terminal content received in a first message.
3. After reviewing cited prior art, Examiner withdraws previous rejection and preformed an additional search.

Drawings

4. Figure 1 and 2 should be designated by a legend such as --**Prior Art**-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claim 2 recites a mobile terminal in the preamble, however the claim appears to be claiming a first base station, a second base station, which is separate from the mobile terminal. Therefore, it is unclear to Examiner as to what Applicant is actually claiming. Furthermore, what is meant by "experiences"?

7. Claims 22 and 29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

8. Claims 22 and 29 are narrative in form, because there is no method steps associated with Applicants' claim of "performing soft handoff." Examiner questions how is the handoff operation being performed? As indicated above, what is meant by "experiences"?

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later

invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

11. Claims 1, 2, 15, 22, 29, 30, 40, 43 and 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamashita et al (US Pat. 6,108,547) in view of La Porta et al (US Pat. 7,239,618).

Regarding claims 1, 2, 15, 22, 29 and 30, Yamashita et al (US Pat. 6,108,547) discloses soft handoff control between BTSs serviced by MTSOs (Host) wherein traffic between BTSs (first base station and second base station) via a communication line, thereby achieving a soft handoff between BTSs and setup messages and acknowledgments are retransmitted (Abstract, Fig. 1,). In addition, the control of the soft handoff is controlled by BTS (col. 5, line 18-44) Yamashita is silent on IP-in-IP encapsulation.

As indicated above, Yamashita discloses handoff is performed via a communication line, but does not specify a particular communication line. However, in a wireless mobile communication system, La Porta discloses base stations (first/second base stations) and a mobile terminal communicate via the Internet/IP-in-IP encapsulation (Abstract, Fig. 15, col. 5, line 20-60), wherein packets received by base station from host/router are inherently retransmitted in a wireless communication environment when a handoff occurs, and setup messages received at BS10 are forward by BS10 to BS 9/hop after BS10 refresh setup message (Fig. 15, col. 24, line 11-61, first BS sends message setup to second BS via Internet, wherein the mobile is in serviceable area of both base stations).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to be motivated to implement multiple base stations communicating via a communication line wherein the communication line is IP-in-IP communication line as taught by La Porta with the teachings of Yamashita for the purpose of further carrying out soft handoff in a mobile environment.

Regarding claim 40, 43 and 46, Yamashita further discloses simultaneous transmission of base stations to mobile serviced by both base stations (col. 1, line 20-42, col. 2, line 6-22, col. 4, line 52-67).

12. Claims 3, 4, 6-8, 23-28, 30, 31, 33-38, 41, 44 and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamashita et al (US Pat. 6,108,547) in view of La Porta et al (US Pat. 7,239,618) as in claims 1, 2, 15, 22, 29 and 30, and further in view of Comstock (US Pat 6,452,920).

Regarding claims 3, 4, 6-8, 30, 31, 33-36 and 41, as indicated above, combined Yamashita and La Porta discloses handoff is performed via a communication line, but does not specify a particular communication line. However, in a wireless mobile communication system, La Porta discloses base stations (first/second base stations) and a mobile terminal communicate via the Internet/IP-in-IP encapsulation (Abstract, Fig. 15, col. 5, line 20-60), wherein packets received by base station from host/router are inherently re-transmitted in a wireless communication environment when a handoff occurs, and setup messages received at BS10 are forward by BS10 to BS 9/hop after BS10 refresh setup message (Fig. 15, col. 24, line

11-61, first BS sends message setup to second BS via Internet, wherein the mobile is in serviceable area of both base stations. Although La Porta, discloses removing IP address as associated with the header in an IP-in-IP encapsulation, La Porta and Yamashita fail to teach on encapsulating packets with a header and removing header from packet and transmitting from both first base station and second base station while soft handoff is being communicated.

In a mobile IP environment, Comstock discloses tunneling between two base stations (HA and FA) wherein in a the communication between correspondent node, mobile node, home agent includes encapsulation and de-encapsulation of packet data, which includes a process of adding IP headers and stripping of the IP header as it is associated with encapsulation process and the transmission of packets to mobile node or agent, whereby transmission is via connection link/handoff (col. 5, line 8-56, col. 6, line 7-33).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to be motivated to implement performing encapsulating packets with a header and removing header from packet and transmitting from both first base station and second base station while soft handoff is being communicated as disclosed by the combined teachings of Comstock with the combined teachings of Yamashita and La Porta for the purpose of further improving handoffs in a mobile IP environment.

Regarding claim 23-28, 37 and 38, as indicated above, combined Yamashita, La Porta and Comstock discloses handoff is performed via a communication line, but does not specify a particular communication line. However, in a wireless mobile communication system, La Porta discloses base stations (first/second base stations) and a mobile terminal communicate via the Internet/IP-in-IP encapsulation (Abstract, Fig. 15, col. 5, line 20-60), wherein packets received by base station from host/router are inherently re-transmitted in a

wireless communication environment when a handoff occurs, and setup messages received at BS10 are forward by BS10 to BS 9/hop after BS10 refresh setup message (Fig. 15, col. 24, line 11-61, first BS sends message setup to second BS via Internet, wherein the mobile is in serviceable area of both base stations.

Although Yamashita and La Porta are not clear on encapsulating packet with a new header (second, third, fourth, and so on), Comstock further discloses the implementation of a new header, as it is associated with the tunneling of packets/encapsulation (col. 2, line 55-67).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to be motivated to implement encapsulating packet with a new header as taught by Comstock with the combined teachings of Yamashita and La Porta for the purpose of further improving handoff in an mobile IP environment, so that the new header acts as a shield to minimize interference.

Regarding claim 39 and 42, as indicated above, Yamashita, La Porta and Comstock discloses handoff is performed via a communication line, but does not specify a particular communication line. However, in a wireless mobile communication system, La Porta discloses base stations (first/second base stations) and a mobile terminal communicate via the Internet/IP-in-IP encapsulation (Abstract, Fig. 15, col. 5, line 20-60), wherein packets received by base station from host/router are inherently re-transmitted in a wireless communication environment when a handoff occurs, and setup messages received at BS10 are forward by BS10 to BS 9/hop after BS10 refresh setup message (Fig. 15, col. 24, line 11-61, first BS sends message setup to second BS via Internet, wherein the mobile is in serviceable area of both base stations.

Although Yamashita and Comstock are not clear on monitoring delay between messages, La Porta further discloses monitoring end-to-end delays associated with messaging and registration (col. 1, line 26-65, col. 6, line 20-35, col. 35, line 28-55).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to be motivated to implement monitoring end-to-end delay (delay between messages) as taught by La Porta with the combined teachings of Yamashita and Comstock for the purpose of further improving handoffs in a mobile IP environment.

Regarding claim 5 and 32, as indicated above, combined Yamashita, La Porta and Comstock discloses handoff is performed via a communication line, but does not specify a particular communication line. However, in a wireless mobile communication system, La Porta discloses base stations (first/second base stations) and a mobile terminal communicate via the Internet/IP-in-IP encapsulation (Abstract, Fig. 15, col. 5, line 20-60), wherein packets received by base station from host/router are inherently re-transmitted in a wireless communication environment when a handoff occurs, and setup messages received at BS10 are forward by BS10 to BS 9/hop after BS10 refresh setup message (Fig. 15, col. 24, line 11-61, first BS sends message setup to second BS via Internet, wherein the mobile is in serviceable area of both base stations. La Porta further discloses IP network as part of the CDMA network.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to be motivated to implement utilizing IP as part of CDMA as taught by La Porta with the combined teachings of Yamashita and Comstock for the purpose of further improving handoffs in a mobile IP environment.

1. Claim 41, 44 and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamashita et al (US Pat. 6,108,547) in view of La Porta et al (US Pat. 7,239,618) as in claims 1, 2, 3, 15, 22, 23, 29 and 30, and further in view of Comstock (US Pat 6,452,920), and further in view of Seal et al (Non-Patent Literature).

Regarding claims 41, 44 and 45, as indicated above, combined Yamashita, La Porta and Comstock discloses handoff is performed via a communication line, but does not specify a particular communication line. However, in a wireless mobile communication system, La Porta discloses base stations (first/second base stations) and a mobile terminal communicate via the Internet/IP-in-IP encapsulation (Abstract, Fig. 15, col. 5, line 20-60), wherein packets received by base station from host/router are inherently re-transmitted in a wireless communication environment when a handoff occurs, and setup messages received at BS10 are forward by BS10 to BS 9/hop after BS10 refresh setup message (Fig. 15, col. 24, line 11-61, first BS sends message setup to second BS via Internet, wherein the mobile is in serviceable area of both base stations. La Porta further discloses IP network as part of the CDMA network.

Although Yamashita, La Porta and Comstock are not clear on a header including an option field that represents time for transmission, in a wireless mobile computing environment, Seal discloses coding and decoding as associated in communicating packet data, wherein headers can obtain optional fields that include PCR field, which is used for timing in the transport of packet data (page 58, left column, 4th and 5th paragraph, right column, last paragraph, page 59, first paragraph).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to be motivated to implement a header including an optimal field, Yamashita, La Porta

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and Comstock on field that represents time for transmission as taught by Seal with the combined teachings of for the purpose of further improving handoffs in a mobile IP environment.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Prenell P. Jones whose telephone number is 571-272-3180. The examiner can normally be reached on 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor Wing Chan can be reached on 571-272-7493. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Prenell P. Jones
January 31, 2008


2/4/08
WING CHAN
SUPERVISORY PATENT EXAMINER